BRUHATH BANGALORE MAHANAGARA PALIKE

Name of work:- Providing water supply and other works at ward no.07, Byatarayanapura Kodigehalli Sub Division.

SL	Description of work	No.	Dimensions			Qty	Rate	Amount
			L	B	D			
1	2	3	4	5	6	7	8	10
1	KSRB 2-1.1: Earth work in surface excavation in ordinary soil for leveling and lowering the ground manually (other than foundation of buildings, culverts, road drains and trenches of pipe line and cables) and removing the excavated stuff to a distance not exceeding 50m and lift upto 1.5m, excavated surface leveled and neatly dressed, disposed earth to be leveled after breaking of clods and neatly dressed as per specifications, Specification No KBS 2.1(a) / 2.3.1, No. 5 / Item No. 2.1							
	For Leveling Ground	1	4	3.5	0.15	2.10		
	Centre Line 2 Nos	2	3.65	0.9	0.9	5.91		
		2	3.05	0.9	0.9	4.94		
	In front portion	1	4	3	0.3	3.60		
	For water pipe line	1	1110	0.3	0.3	99.90		
	Basic rate	cum	**157.00**			**116.45**	**169.56**	19746
	Add A.W. 8%		12.56					
	Total		**169.56**					
2	KSRB 4-1.3 : Providing and laying in position plain cement concrete of mix 1:4:8 with OPC cement @ 180 kgs with 40mm and down size graded granite metal coarse aggregates @ 0.85cum and fine aggregares @ 0.57 cum machine mixed, concrete laid in layers not, exceeding 15cms, thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1,4.2. No. 12 / Item No. 4.3 /							
	Wall Portion	2	3.65	0.90	0.15	0.99		
		2	3.05	0.90	0.15	0.82		
	Flooring	1	3.20	2.60	0.15	1.25		
	Building Suroundings	2	3.65	0.60	0.15	0.66		
		2	3.05	0.60	0.15	0.55		
	In front portion	1	4	3	0.15	1.80		
	For water pipe line	1	1110	0.3	0.15	49.95		
	Basic rate	cum	**4867.00**			**56.01**	**5256.36**	294425
	Add A.W. 8%		389.36					
	Total		**5256.36**					
3	KSRB 5.2.3 : Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar 1:6, stone hammerd dressed in courses not less than 20 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications.KBS 5.1.13 Page No. 23 / Item No. 5.6 /							

	Wall Portion	2	3.65	0.75	0.60	3.29		
		2	3.05	0.75	0.60	2.75		
	Basic rate	cum	**4187.00**			**6.03**	**4521.96**	27268
	Add A.W. 8%		334.96					
	Total		**4521.96**					
4	KSRB 5.3-3 : Providing and constructing granite / trap / basalt size stone masonry in basement with cement mortar 1:6, edges of stones chistle dressed in courses not less than 15 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications.KBS 5-1.13 Page No. 23 / Item No. 5.9 /							
	Wall Portion	2	3.65	0.45	0.45	1.48		
		2	3.05	0.45	0.45	1.24		
	Basic rate	cum	**5005.00**			**2.71**	**5405.40**	14668
	Add A.W. 8%		400.40					
	Total		**5405.40**					
5	KSRB 2.3 : Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20 cms. in depth, compacting each deposited layer by ramming after watering with lead upto 50 m. and lift upto 1.5 m. including cost of all labour complete as per specifications. Specification No. KBS 2.9 Page No. 6 / Item No. 2.10							
						116.45		
	Basic rate	cum	**127.00**			**116.45**	**137.16**	15973
	Add A.W. 8%		10.16					
	Total		**137.16**					
6	KSRB 4-1.6 : Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240 kgs with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregates @ 0.459 cum, machine mixed, concrete laid in layers not exceeding 15cms, thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM of machinery, curing complete as per specifications, specification. No. KBS 4.1,4.2. No. 12/ Item No. 4.6							
		2	3.65	0.45	0.10	0.33		
		2	3.05	0.45	0.10	0.27		
	Building Suroundings	2	3.65	0.60	0.10	0.44		
		2	3.05	0.60	0.10	0.37		
	Water pipe line	1	1110	0.3	0.10	33.30		
	Basic rate	cum	**5441.00**			**34.71**	**5876.28**	203949
	Add A.W. 8%		435.28					
	Total		**5876.28**					
7	Providing flooring with 60 cms.x 60 cms. size Vitrified glazed tiles of approved quality & make, fixed on top of existing flooring fixed with suitable adhesive, including cutting the tiles to the required size and fixing etc., complete Page No. 107, Item No. 14.44,							
		1	3.20	2.60		8.32		

	Basic rate	cum	**1069.00**			**8.32**	**1154.52**	9606
	Add A.W. 8%		85.52					
	Total		**1154.52**					
8	KSRB 14.6-1: Providing and laying heavy duty cobble stones 60mm thick interlock pavers, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. Specification No. KBS (P.101/I.14.6)							
		1	4.00	3.00		12.00		
	Basic rate	sqm	**912.00**			**12.00**	**984.96**	11820
	Add A.W. 8%		72.96					
	Total		**984.96**					
	Providing RO Plant							
	Providing revsrse osmosis suystem to cover 2000 Liters of High TDS water per hour							
	TECHNICAL SPECIFICATIONS							
	Flow Rate:							
	Feed Water : 5000 LPH							
	Treated Water : 3000 LPH							
	Reject Water : 2000 LPH							
	RAW WATER PUMP							
	Purpose:- To feed the Dual Medial filter at pressure more than 2.00 bars which is min operating pressure for filter?							
	SAND MEDIA FILTER							
	Purpose:- To remove the total suspendred solids, dirt, iron and reduce silt density index which can foul the members							
	ACTIVATE CARBON FILTER							
	Purpose:- To remove the total color, smell, odor from the water.							

	Media: Mixed bed sand media consisting of the following i) Gravel ii) Pebbles iii) carbon Average porosity 50 micron particulate size bed depth : 1500 mm pipelines & Accessories : Pipe of PVC 10 Bar tested pressure testing cock & pressure gauges at intlet - outlet of system							
	DOSING SYSTEM							
	Purpose : To dose anti scaling chemical to protect the scaling formation on RO Membranes							
	MICRON FILTER							
	Purpose : To remove the fine particles ip to 05 microns and reduce silt density levels to acceptable level.							
	HIGH PRESSURE PUMP							
	Purpose : To feed the reverse Osmosis membrane at pressure more than the osmotic pressure taking into consideration flux rate, flow and recovery							
	RO membrane housing.							
	Purpose : To pack membrane and operate at high pressure.							
	RO MEMBRANES							
	Purpose : To remove the major part of TDS into 98% by Reverse Osmosis Membranes arranged and designed to give adequate flow the Recovery.							
	RO CLEANSING SYSTEM							
	ELECTRICAL PANEL							
	Purpose : A control panel is provided as a safety measure for the pumps & other electrical items.							
	Specifications a) Complete starters, overload relays, b) Voltmeter, Ammeter, MCB's indicating lights, c) Rocker switches for Dozers, d) incomers, Auto-Manual switches.							
	INSTRUMENTATION							

	Purpose : a) Flow meter : To measure the online flow of water ...wtec b) Low pressure switch : To protect RO pump from dry running c) High pressure switch : To protect RO pump from back pressure d) Pressure Gauges : For calculate AP for each unit in RO system							
	PH DOSING SYSTEM							
	Purpose to dose sodium Bi-carbonate for enhances product water SS till the pre-filteration & SS from HPP to thhe premeter line termination point NRV's pressure relief valves, wherever needed the system will be on common SS base frame supply & manufacture of complete Reverse Osmosis plant stainless steel tank (2kl) Raw water tank (5kl) with stainless steel pipe line required for plant erection.							
		1					1.00	946000
18	Providing and Construction of pup panel cabin MS material vetical 50 x 100 mm thick tube, rafter 50 x 100 mm thick rectangle tube 50 x 50 mm thick tuve purlines, roof panel of 30 mm sandwitch puf panel density : 40 kg and wall panel of 30 mm sandwitch puf pannel density : 40 kgs (polyurethane foam) with noth side G I Colour coated sheet ancillaries like C-channels, angles, sealene etc, door of size 1.8 x 2.0 m an alluminium powder coated window of size 1.00 x 2.00 m 1 No of structural glazing (fixed and sliding One side slope as per elclosed drawing cabin of size etc (Approved Quoated Rate) (10 x 8Ft)							
		1				1.00		
	Approved Rate		**250204.80**			**1.00**	**250204.80**	250204.80
	Electrification chages							50000
	WATER PIPELINE							
9	Cutting of road surface for pipeline trenches and disposing of the excavated stuff as directed including barricading, danger lighting etc., in the Asphalt surface road. (P-257, It-37.38)							
		1	1110.00	0.30	0.30	99.90		
	Basic rate	cum	**340.00**			**99.90**	**367.20**	36684
	Add A.W. 6%		27.20					
	Total		**367.20**					
10	Cutting of road surface for pipeline trenches and disposing of the excavated stuff as directed including barricading, danger lighting etc., in the Cement Concrete road. (P-257, It-37.40)							
		1	1110.00	0.30	0.30	99.90		
	Basic rate	cum	**607.00**			**99.90**	**655.56**	65491

	Add A.W. 6%		48.56						
	Total		**655.56**						
11	Providing and installing at site of work P.V.C. pipes including cost of pipes and specials and labour, including lowering into trenches, laying true to line, level and perfect linking at joints leak proof including jointing of approved type with all labour and lift charges, handling charges including encasing the pipe alround to depth not less than 15cms with gravel or selected earth available from the excavation etc. complete PRED SR 2012-13 (P-14, It,-3.4.2a) 63mm dia of 6Kg/Cm2								
		1	1110.00			1110.00			
	Basic rate	m	**112.00**			**1110.00**	**115.36**	128050	
	Add A.W. 3%		3.36						
	Total		**115.36**						
12	Refilling the basement and pipeline trenches with selected available earth from trench excavation including watering, Consoldation in layers of 15cm thick including disposing of the surplus earth with a lead of 200 Meters.PRED SR 2012-13 (P-3, It,-1.6)								
		1	1110.00	0.45	0.45	224.78			
	Basic rate	cum	**112.00**			**224.78**	**115.36**	25931	
	Add A.W. 3%		3.36						
	Total		**115.36**						
13	KSRB 13-6.2-2: Providing and fixing in position brass stop cock of approved quality 20mm nominal bore including cost of all materials, labour and HOM of equipments with all leads complete as per specifications. Specification No. KBS . 20mm dia nominal bore.13.2.2/13.3(P-91, It.No.13.27)								
		40				40.00			
	Basic rate	Nos	**158.00**			**40.00**	**167.48**	6700	
	Add A.W. 6%		9.48						
	Total		**167.48**						
14	KSRB 13-6.3-7: Providing and fixing in position brass gate valve with C.I.wheel of approved quality (screwed end) 65mm nominal bore including cost of all materials, labour and HOM of equipments with all leads complete as per specifications. Specification No. KBS 20mm dia nominal bore.13.37, (P-92, It.No.13.37)								
		40				40.00			
	Basic rate	Nos	**2052.00**			**40.00**	**2175.12**	87005	
	Add A.W. 6%		123.12						
	Total		**2175.12**						
15	KSRRB M100-1 Loading and unloading of stone boulder/stone aggregates/ sand/ kanker/ moorum. KSRRB M100-1:Placing tipper at loading point loading with front end loading, dumping turning for return trip, excluding time for haulage and return trip complete as per specification MORTH Chapter 1 (Page 118, item No. 17.1)								

	Basic Rate	cum	68.00			316.25	106.00	33523
	Rs. 2.50 Tonne Km.							
	Average Weight of earth 1.28 Tonne/Km.							
16	For 10 Km							
	Rs.2.50X1.28TonneX10Km		32.00					
	Total		100.00					
	Add Area Weightage6%		6.00					
			106.00					
17				Sub Total				2229770.80
18				Add 11% KRIDL Charges				245274.79
				Add 1% labour cess charges				22297.71
19				Sub Total- for one unit				2497343.30
20				Miscellaneous and rounding off				2656.70
21							Total:-	2500000.00

Certificate:-

1)This is certified that the work spot comes under BBMP limits only.

2)The rates are as per CSR of 2016-17 year of PWD Bangalore Circle.

3)The Provisions made in estimate are adequate and necessary.

Asst.Engineer
Ward no.7

Asst.Exe.Engineer
Kodigehalli Sub-division
B.B.M.P.

Executive Engineer
Byatrayanapura Division
B.B.M.P.

Administrative Approval
Accorded For 25.00 lakh Rs.
Head of A/C P3110
CER NO :187 Dt:.. 27/12/17
TA CE (YNK)

Technical Sanction
Accorded For 25.00 lakh Rs
Head of A/C P3110
CER NO :538 Dt:.. 12/01/18
TA CE (YNK)